

What is claimed is:

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1. A driving module for applying a driving signal to a display cell circuit having a plurality of signal transmission lines and formed on a transparent substrate through the plurality of signal transmission lines, comprising:
    - a flexible board;
    - a driving circuit mounted on the flexible board;
    - a plurality of driving signal input/output lines that are electrically communicated with the driving circuit and the display cell circuit so as to input/output the driving signal; and
    - an inspecting means formed on the plurality of driving signal input/output lines for inspecting states of the plurality of driving signal input/output lines and the driving signal.
  2. The driving module as claimed in claim 1, wherein the plurality of driving signal input/output lines are formed at a side of the transparent substrate.
  3. The driving module as claimed in claim 1, wherein the driving circuit is a gate driving circuit, and the driving signal is a gate driving signal that is applied from the gate driving circuit to a gate of the display cell circuit through the signal transmission lines.
  4. The driving module as claimed in claim 3, wherein the plurality of

driving signal input/output lines comprise:

a plurality of gate driving signal input lines that are formed on the flexible board for providing the gate driving signal to the gate driving circuit;

a plurality of gate driving signal bypass lines which are formed on the flexible board for providing the gate driving signal supplied from the gate driving circuit to a next circuit; and

a gate driving signal output line that is connected between the gate driving circuit and the signal transmission lines so as to provide the gate driving signal supplied from the plurality of gate driving signal input lines to the signal transmission lines.

5. The driving module as claimed in claim 4, wherein each of the plurality of gate driving signal input lines is correspondingly connected to each of the plurality of gate driving signal bypass lines in the gate driving circuit.

6. The driving module as claimed in claim 5, wherein the inspecting means is formed at only one group of the plurality of gate driving signal input lines and the plurality of gate driving signal bypass lines.

7. The driving module as claimed in claim 5, wherein the inspecting means is separately formed at the plurality of gate driving signal input lines and the plurality of gate driving signal bypass lines, and in a line in which a gate driving signal input line is electrically communicated with a gate driving signal bypass line,

the inspecting means is formed at only one of the gate driving signal input line and the gate driving signal bypass line.

5        8.        The driving module as claimed in claim 3, wherein the inspecting means is formed by point-shaped patterns having an area larger than an area of each gate driving signal input line and gate driving signal bypass line.

10        9.        A liquid crystal display device, comprising:  
a liquid crystal display panel having a plurality of first and second signal transmission lines and display cell circuits that are connected to pairs of first and second signal transmission lines, the liquid crystal display panel displaying an image in response to first and second driving signals inputted through the first and second signal transmission lines;  
an integrated printed circuit board for generating the first and second driving signals;  
15        a plurality of first driving modules that are electrically connected between the integrated printed circuit board and the plurality of first signal transmission lines so as to transmit the first driving signal to the first signal transmission lines after controlling a time for applying the first driving signal from the integrated printed circuit board; and  
20        a plurality of second driving modules having a plurality of driving signal input/output lines connected to the plurality of second signal transmission lines, the second driving modules transmitting the second driving signal to the second signal

transmission lines after controlling the time for applying the second driving signal from the integrated printed circuit board, the second driving modules inspecting states of the second driving signal and the plurality of driving signal input/output lines.

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10. The liquid crystal display device as claimed in claim 9, wherein the plurality of driving signal input/output lines are formed at a side of the liquid crystal display panel.

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11. The liquid crystal display device as claimed in claim 9, wherein the first signal transmission lines are data signal transmission lines, the second signal transmission lines are gate signal transmission lines, the first and second driving signals are data and gate driving signals, respectively, and the first and second driving modules are data and gate driving modules, respectively.

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12. The liquid crystal display device as claimed in claim 11, wherein the gate driving module comprises:

- a flexible board;
- a gate driving circuit mounted on the flexible board;
- a plurality of driving signal input/output lines that are electrically communicated with the gate driving circuit and the display cell circuit so as to input/output the gate driving signal; and
- an inspecting means formed on the plurality of driving signal input/output

lines for inspecting states of the plurality of driving signal input/output lines and the driving signal.

5        13.    The liquid crystal display device as claimed in claim 12, wherein the plurality of driving signal input/output lines comprises:

        a plurality of gate driving signal input lines that are formed on the flexible board for providing the gate driving signal to the gate driving circuit;

10        a plurality of gate driving signal bypass lines that are formed on the flexible board for providing the gate driving signal supplied from the gate driving circuit to a next circuit; and

15        a gate driving signal output line which is connected between the gate driving circuit and the second signal transmission lines so as to provide the gate driving signal supplied from the plurality of gate driving signal input lines to the signal transmission lines.

20        14.    The liquid crystal display device as claimed in claim 13, wherein each of the plurality of gate driving signal input lines is correspondingly connected to each of the plurality of gate driving signal bypass lines in the gate driving circuit.

25        15.    The liquid crystal display device as claimed of claim 14, wherein the inspecting means is formed at only one group of the plurality of gate driving signal input lines and the plurality of gate driving signal bypass lines.

16. The liquid crystal display device of claim 14, wherein the inspecting means is separately formed at the plurality of gate driving signal input lines and the plurality of gate driving signal bypass lines, and in a line in which a gate driving signal input line is electrically communicated with a gate driving signal bypass line, the inspecting means is formed at only one of the gate driving signal input line and the gate driving signal bypass line.

17. The liquid crystal display device as claimed in claim 16, wherein the inspecting means is formed by point-shaped patterns having an area larger than an area of each gate driving signal input line and gate driving signal bypass line.

18. The liquid crystal display device as claimed in claim 11, further comprising a first means for transmitting the gate driving signal from the integrated printed circuit board to a foremost gate driving module among the plurality of gate driving modules, the first means being formed on the liquid crystal display panel.

19. The liquid crystal display device as claimed in claim 18, further comprising a second means for transmitting the gate driving signal from the integrated printed circuit board to an adjacent gate driving module among the gate driving modules, the second means being formed on the liquid crystal display panel.